



# Conformity Assessment in Technical Regulations

ASRO General Assembly  
June 21, 2016

[IAPMO.ORG](http://IAPMO.ORG)

THE  
IAPMO  
GROUP  
World Headquarters  
West  
4755

# Agenda

- Introduction to the IAPMO Group
- What is at Stake?
  - Discussion framed around water/sanitation/plumbing
  - Confluence of Public Health and Sustainability
  - Conformity Assessment is Part of the Solution
- Lessons Learned - International Case Studies
  - United States
  - India
  - Guinea
  - Jordan
  - Indonesia

# The IAPMO Group – Who We Are

## COMPLETE INTERNATIONAL SERVICE ORGANIZATION

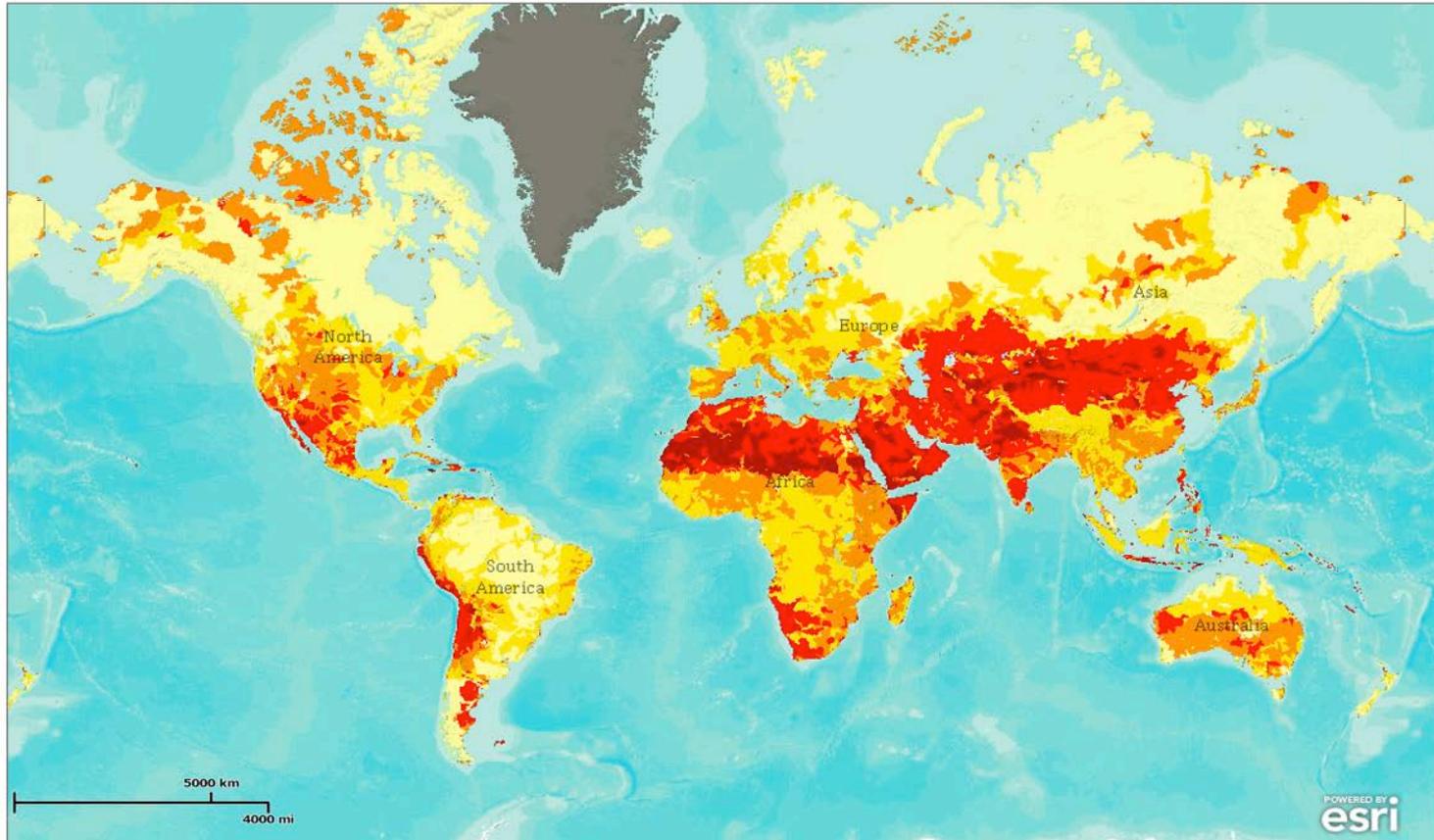
- Code Development
- Standards Development
- Industry-leading Training and Education
  - From market access to capacity building
- Accredited Industry Leading Compliance Programs
  - Test Labs, 3<sup>rd</sup> Party Certification Program, Continuous Compliance Inspection Program
- We Focus On Where People Come In Contact With Water



# Confluence of Public Health & Sustainability

 AQUEDUCT

Overall Water Risk  
Default

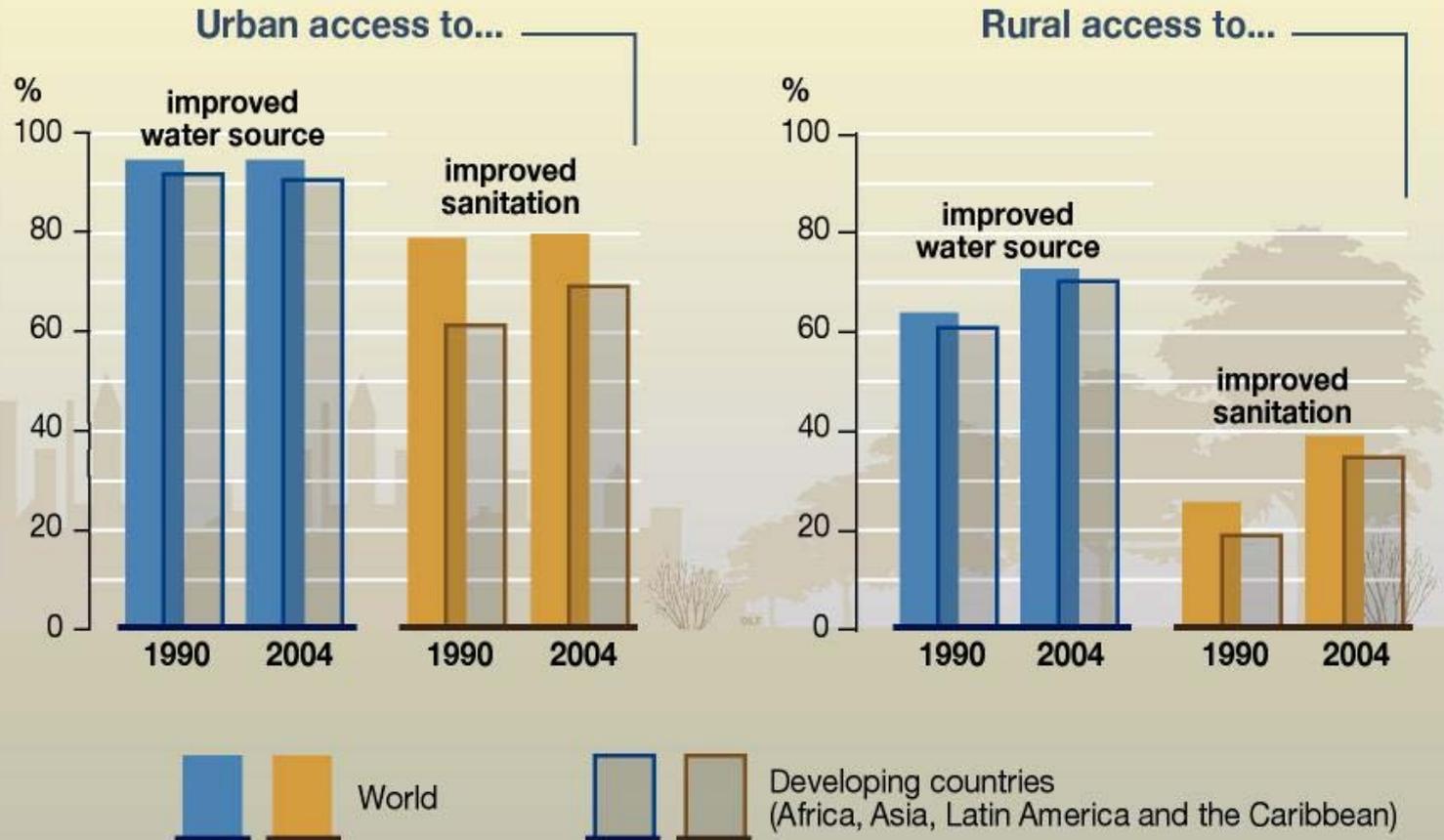


Data provided by:  WORLD RESOURCES INSTITUTE

February 11, 2013



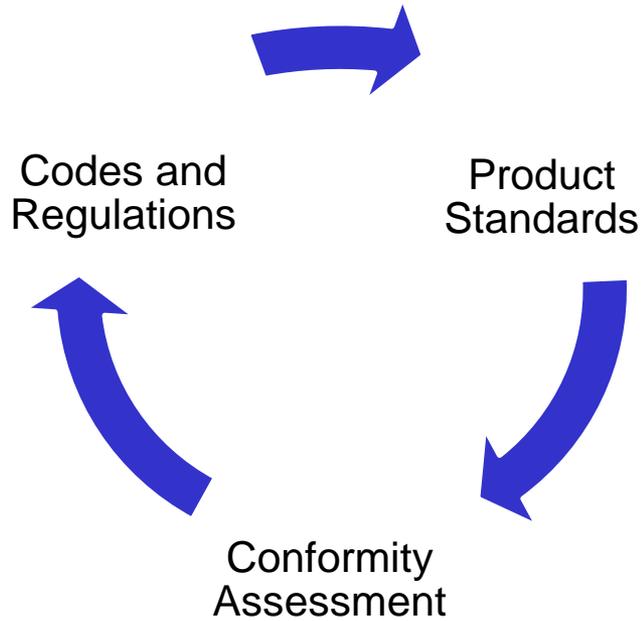
# UNEP: Access to Sanitation



Sources: *Meeting the MDG Drinking Water and Sanitation Target*, World Health Organisation (WHO) and United Nations International Children's Emergency Fund (Unicef), 2006.

PHILIPPE REKACEWICZ  
FEBRUARY 2002

# The Big Question – How to Develop an Industry?



- Each plays a vital role
- Effective framework
- Level playing field
- Substantial industry involvement

**Codes and Regulations** are intended to protect health and safety

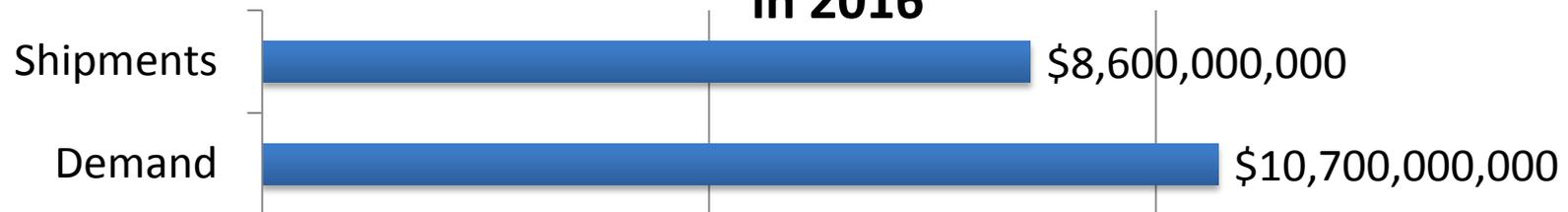
**Standards** dictate specific product performance requirements within the codes

**Conformity assessment** is a process to help to insure the mandates within the codes, standards and regulations are met.

# Standards = Foundation for CA Activities

- Becomes national framework to which regulators, labor, manufacturers, and educators can respond.
- Creates a level playing field – open, transparent, equal treatment
- Promotes public health and access to clean water & sanitation
- Encourages the development of a skilled workforce
- Aligns market access requirements with international community and protects market from inferior goods
- Provides a pathway for innovative, sustainable products and services to be utilized

## Projected US Demand & Shipment of Plumbing Products in 2016



# Standards Usage in the United States

- **Adoption:** Jurisdiction may a voluntary consensus standard by incorporating it directly into its regulation.
- **Basis for rulemaking:** uses a VSC as the foundation to a public rulemaking. May make small alterations in the drafting state and as it receives public comments. Occurs at State level as well.
- **Regulatory guides:** Agency may recognize adherence to a standard as a noncompulsory pathway to complying with a regulation
- **Guidelines:** Agency may use standards as guidelines for complying with general requirements. Guidelines are advisory only and does not necessitate that the general requirement has been met.
- **Deference in lieu of developing a mandatory standard:** Agency decides that it does not need to issue a mandatory requirement because voluntary compliance with either an existing standard will suffice.

# United States – Energy Star



## Healthier environment for American families

- Since 1992—good for the environment; good for the bottom line.
- More than 60 different categories of ENERGY STAR qualified products.
- Tens of thousands of ENERGY STAR certified buildings.
- More than 1 million ENERGY STAR qualified homes.

# United States – Energy Star

| KEY INDICATORS  | YEAR OF RESULTS |                            |
|---|-----------------|----------------------------|
|   | 2000            | 2014                       |
| Annual Emissions Reductions (MMTCO <sub>2</sub> e)        | 54              | > 283                      |
| Cumulative Emissions Reductions (MMTCO <sub>2</sub> e)    | > 160 million   | > 2.4 billion              |
| Annual Net Energy Bill Savings <sup>1</sup>               | \$10 billion    | > \$31 billion             |
| Cumulative Utility Bill Savings <sup>1</sup>              | \$19 billion    | \$362 billion              |
| Annual Societal Benefits <sup>1</sup>                     | —               | \$11 billion               |
| Electricity Savings as % of Total U.S. Electricity Demand | >1%             | ~ 5%                       |
| Brand Awareness Among American Households                 | 40%             | > 85%                      |
| Cumulative Individuals Taking the ENERGY STAR Pledge      | —               | > 3.2 million              |
| ENERGY STAR CERTIFIED PRODUCTS                            |                 |                            |
| Cumulative Certified Products Sold <sup>2</sup>           | 600 million     | > 5.2 billion <sup>3</sup> |
| Annual Certified Products Sold                            | 171 million     | > 320 million              |
| Individual Certified Product Models                       | 11,000          | > 45,000                   |
| Product Categories Eligible for ENERGY STAR               | 33              | > 70                       |
| Manufacturing Partners                                    | 1,600           | > 1,600                    |
| Retail Partners   | 550             | > 2,600                    |



# United States - EPA WaterSense

- Voluntary partnership and labeling program launched by U.S. EPA in 2006 designed to reduce municipal water use across the country
- Simple way for consumers to identify products that use 20% less water and perform well
- A label with integrity - third-party certified, not only for efficiency, but for performance too
- 346 billion gallons saved by WaterSense in 2014 alone, 1.1 trillion gallons since 2006.
  - Saves water, reduces energy consumption, saves consumers money
- 5.5 percent of California's 33.5 million installed residential and commercial toilets the WaterSense standard (1.28 gallons per flush/4.28 liters), 21.1% of bathroom faucets (1.5 gmp/5.68 lpm), 23.9% of showerheads (2.0 gpm/7.57 lpm)(Source: GMP Research/PMI)



# Guinea – Impact on Rural Communities

- 2015 Study looked at hand pump standards in Africa.
- Standardization types: regulation, endorsement, recommendations, de facto
  - Guinea: First to formally standardize hand pumps in Africa in 1982.
  - Boasts the highest functionality on the continent at 90%. Pumps provide water access for 65% of the population.
  - Policy is mandatory for organizations working within Guinea. Received government support and implementer compliance.
  - Pumps benefit from aftersales support from manufacturers.
  - Practitioners believe that the strict policy in conjunction with the appropriate technology selections has been the recipe for success in Guinea.
- Key finding: Variety of mechanisms (formal and informal) to recognize standards
- Key finding: Institutional champion is required.

- Water

- 88 % of the population of 1.2 billion has access to drinking water from improved sources in 2008, as compared to 68% in 1990.
- 25% of total population in India has drinking water on their premise.
- Sixty seven per cent of Indian households do not treat their drinking water, even though it could be chemically or bacterially contaminated.



- Sanitation

- India is home to 594 million people defecating in the open; over 50% of the population.
- Only 31% of India's population use improved sanitation (2008)
- 211 million people in India gained access to improved sanitation between 1990-2008

# Private/Public Sector Cannot Do It Alone



# Jordan

- **Water Scarcity**

- Considered one of the most water-scarce countries in the world.
- Population depends on groundwater for 80 percent of their freshwater, levels are dropping 3 feet each year and will likely be depleted by 30 to 40 percent within the next 15 years.



- **Conformity Assessment is Key**

- Jordanian plumbing code, incomplete references to product standards
- Personnel certification criteria and training programs in place
- Challenges with enforcement during construction phases
- Current Market = Plumbing product market is saturated with unsafe and unreliable products



# Step #1

## Development of SNI for Plumbing through an open consensus process

Standar Nasional Indonesia (SNI)  
8153:2015 Plumbing Systems for  
Building

Published on March 2015



# Step #2

**Adopt the SNI locally and nationally** - Work with BSN, the Ministry of Public Works, and the Ministry of Industry to have the SNI implemented



# Step #3

**Development educational and training programs –**  
work with national institutions to develop training and certificate programs to help ensure that the SNI is understood and applied



**UII Yogyakarta**



**University Maharasaswati (Bali)**



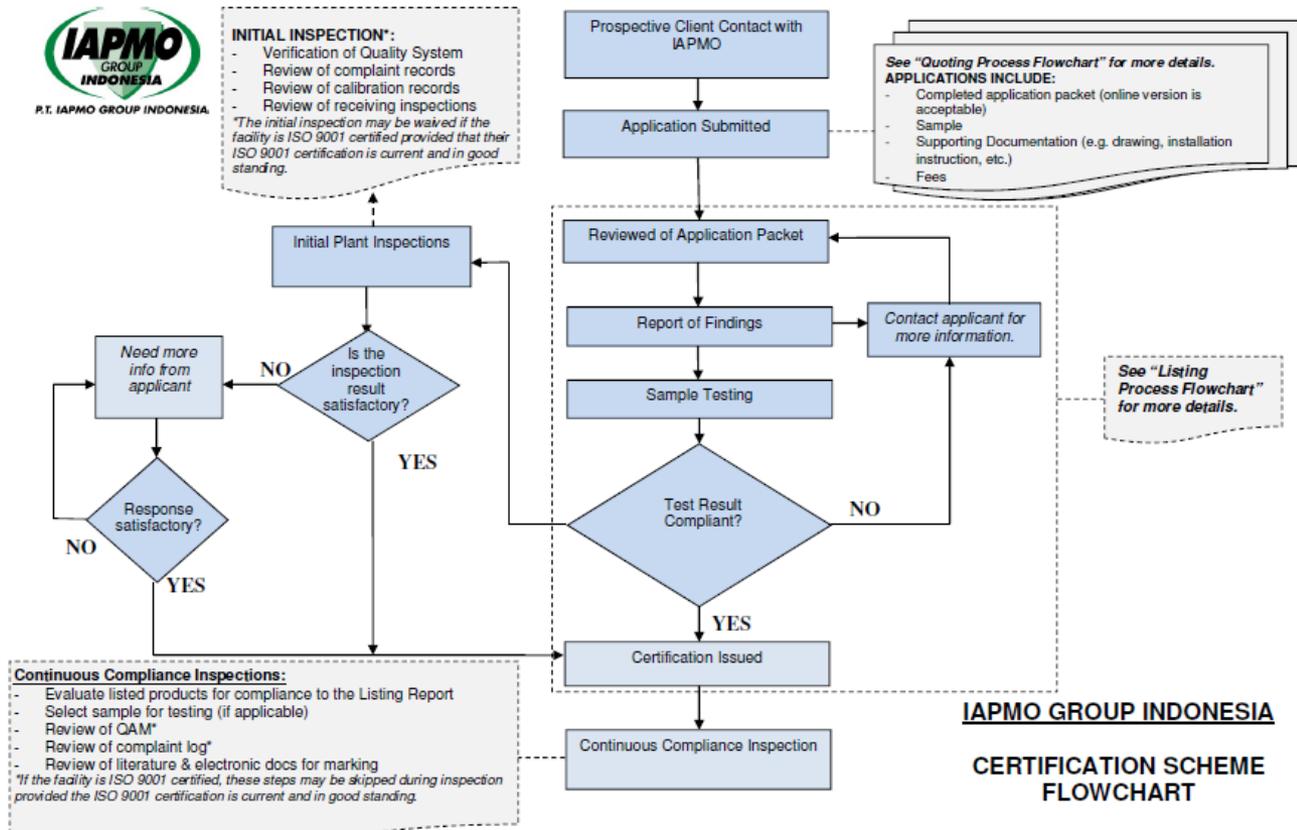
**University Muhammadiyah and  
University Trisakti (Jakarta)**

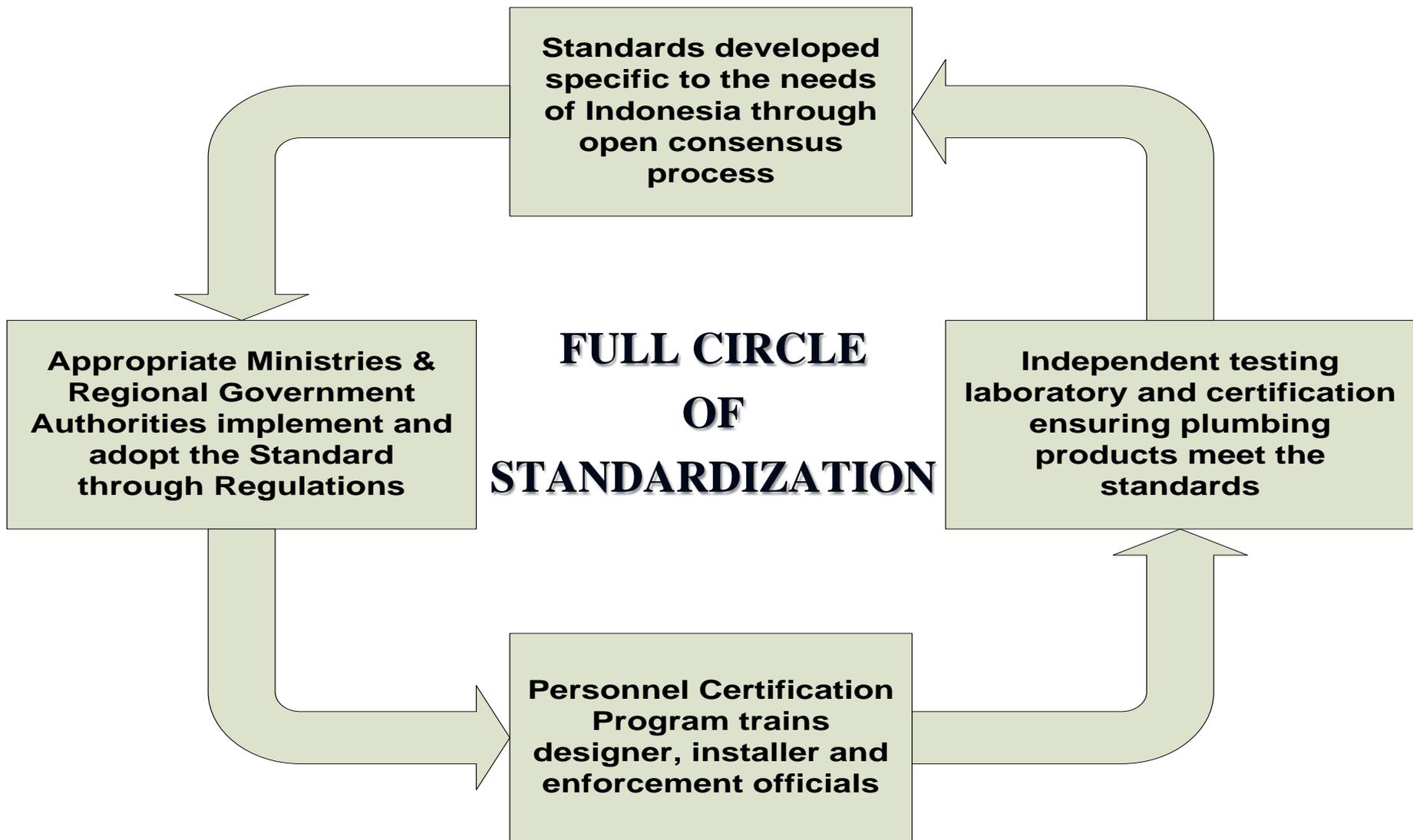


**ITS (Surabaya)**

# Step #4

## Develop a third party testing and certification program for plumbing products





# THANK YOU

**Christopher Lindsay**  
**Manager, Government Relations**  
**[Christopher.Lindsay@iapmo.org](mailto:Christopher.Lindsay@iapmo.org)**

